SARS-CoV-2 INACTIVATION TEST (2019-nCoV)

Test description of the test carried out at an accreditated laboratory for determining the presence of SARS-CoV-2 in ambient air

Awions Cube D6 C30

Below are the tests performed:

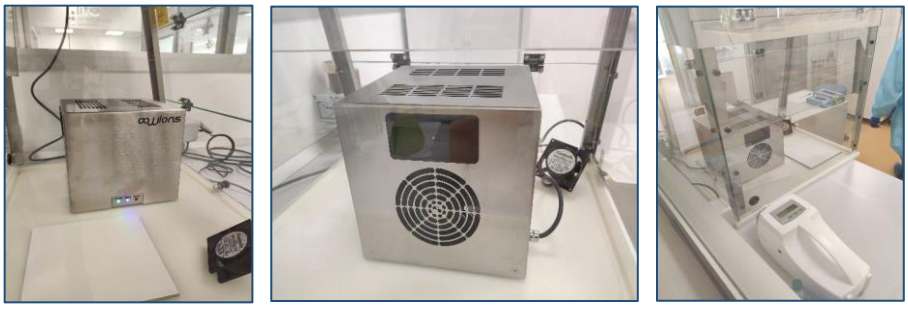
- ***Test nr. 1 (20AB02158) : virus* SARS-CoV-2 *analysis with instrument off:***
  test sample *air indoor*, 10 minutes after virus' nebulization (T = 10 minutes)
- ***Test nr. 2 (20AB02159) : virus* SARS-CoV-2 *analysis with instrument on:***
  test sample *air indoor*, 10 minutes after virus' nebulization (T = 10 minutes)

Testing materials:

The test was performed in a biological contamination contolled environment at Lifeanalytics Srl laboratory, in a room chamber set up to simulate the indoor air environment.

Inside the chamber were placed:

- Instrument - Awions Cube D6 C30
- portable continuous flow nebulizer- with the function of homogeneous dispersion of the inoculum
- ventilation fan inclined at 45 ° from the surface to keep the inoculum suspended in the chamber.



Conclusions:

The first test was performed to confirm the presence of SARS-CoV-2. (Awions Off)

The second test, was perfromed by nebulizing the SARS-CoV-2 virus into the chamber . Then, by **switching on the Cube D6 C30 device continuously for 10 minutes**. After this 10 minute period, another sample was taken, and was negative.

As a result of the activation and continuous operation of the Cube D6 C30 device, the SARS-CoV-2 virus was eliminated within 10 minutes.

TEST REPORT N° 20AB02158

Issuing date: **21/12/2020**

Sample code: **20AB02158**

Receipt date:

Sampling date: **14/12/2020 12.00**

Place and sampling point: **Lifeanalytics Srl - Via Pezza Alta, 22, 31046 Oderzo (TV)**

Sampling by: **Lifeanalytics Srl Technical Staff**

Company Alfa Water S.r.l.
Street Via Cavalieri di V. Veneto, 25/a
City: 32026 Sedico, Belluno (BL)

Start date of analysis: **14/12/2020** End date of analysis: **15/12/2020**

Sample description: **Sample - Instrument Cube D6 C30 off - Detection 2019-nCoV indoors - T=10 min**

TEST RESULTS

Test denomination	Unit of measure	Value	LOQ	Analytical Method
Detection 2019-nCoV (LOD= 3 c/l)		**present**		MI 995 rev. 00 (2020)

This Test Report cancels and replaces the same data Test Report issued on 18/12/2020 due to a change in the customer because of a mistake in the customer request.

Others informations deemed useful for the interpretation of the results:

The reported uncertainty "I" is the expanded uncertainty calculated using a coverage factor of 2 which gives a confidence level of approximately 95. For microbiological research are indicated the upper and lower limit of the confidence interval with level of probability of 95% K=2 or the interval itself. The results of the tests are issued in accordance with the law ISO 7218:2007.
When the results are <4 (UFC/ml) or <40 (UFC/g) the microrganisms are present but fewer than 4 (UFC/ml) or 40 (UFC/g).
"n.r.": < to detection limit LOD (if it is not indicated it is necessary to look at the limit of quantification LOQ).
Please note that each result expressed as "n.r." does not indicate the absence of the parameter in the sample.
LOQ: limit of quantification: It is the lowest analyte concentration in the sample that can be detected with acceptable accuracy under well specified conditions.
LOD: detection limit: it is the lowest analyte concentration in the sample that can be detected but not necessarily quantified under specific conditions. In the case of quantitative analyses it isn't indicate.
When the sampler is not a laboratory technician, the sampling description data shall be provided by the person who performed the sampling and the laboratory shall not be responsible for those data, including any influence on the validity of the results. The results included in the assay report are refererd to the sample received.
Conformity opinions: values that comply with and do not comply with laws, decrees, national and EU regulations, specifications provided by the customer are assessed on a case-by-case.
Rec%: Recovery% it indicates the recovery that has been applied to the result where it is positive.

Direttore laboratorio Dr. Adriano Giusto

Chimico Ordine dei chimici - Provincia di Treviso Iscrizione n° 93
Document digitally signed in accordance with current legislation

Lifeanalytics S.r.l.
Via Pezza Alta 22 - 31046 Oderzo (TV)
P.IVA 14996171006 C.F. 03670110265
Tel +39 0422 1721991 - Fax +39 0422 1569929
servizioclienti@lifeanalytics.it
www.lifeanalytics.it

TEST REPORT N° 20AB02159

Issuing date: **21/12/2020**

Sample code: **20AB02159**

Receipt date:

Sampling date: **14/12/2020 12.00**

Place and sampling point: **Lifeanalytics Srl - Via Pezza Alta, 22, 31046 Oderzo (TV)**

Sampling by: **Lifeanalytics Srl Technical Staff**

Company Alfa Water S.r.l.
Street Via Cavalieri di V. Veneto, 25/a
City: 32026 Sedico, Belluno (BL)

Start date of analysis: **14/12/2020** End date of analysis: **15/12/2020**

Sample description: **Sample - Instrument Cube D6 C30 on - Detection 2019-nCoV indoors - T=10 min**

TEST RESULTS

Test denomination	Unit of measure	Value	LOQ	Analytical Method
Detection 2019-nCoV (LOD= 3 c/l)		**absent**		MI 995 rev. 00 (2020)

This Test Report cancels and replaces the same data Test Report issued on 18/12/2020 due to a change in the costumer because of a mistake in the costumer request.

Others informations deemed useful for the interpretation of the results:

The reported uncertainty "I" is the expanded uncertainty calculated using a coverage factor of 2 which gives a confidence level of approximately 95. For microbiological research are indicated the upper and lower limit of the confidence interval with level of probability of 95% K=2 or the interval itself. The results of the tests are issued in accordance with the law ISO 7218:2007.
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Awions™ – Test against SARS-CoV-2 (Covid 19)

Awions™ achieved in 10 minutes (99.95%) reduction in CoV viral load on the air

Overview

Since the outbreak of the SARS-CoV-2 (Covid-19) pandemic, a unified global effort to prevent the spread of the virus has fueled the development of new technologies or the adaptation of existing technologies effective against the virus. Following the Influenza H1N1 (swine flu) and H5N1 (bird flu) epidemics, Awions Needle Points Bi-Polar ionization technology was tested against these respiratory viruses with a proven 99% removal. A similar testing procedure was applied to evaluating the Awions™'s effect on a CoV virus (similar in size and structure to SARS-CoV-2 used by industry to test SARS-CoV-2 applications). Test results indicated a **99.95%** removal.

Awions™ Technology

Awions™ technology is based on cold plasma (bipolar ionization), a process which mimics a natural phenomenon where forces such as sun and wind generate ions which purify the outdoor air from microbes and pollutants. The Awions™ generator uses electric currents to generate ROS (Reactive Oxidation Species). These ROS attach to the proteins of the microbes (viruses, bacteria, fungus) rendering them inactive.

Test Procedure and Results

1. Location:
   Lifeanalytics laboratory
   Via Pezza Alta,22 Treviso – Italy

2. Viral Media:
   Qnostics
   Sars-CoV-2 Q. Control 01

3. Virus Detection:
   Real-time RT-PCR assay

4. Device:
   Awions Cube

5. Test Procedure:
   Awions Cube device was placed in test room to simulate an environment.
   Portable nebulizer at a continuous flow used for a homogeneous dispersion of inoculum.
   Time: 10 minutes.

6. Test Results:

Awions Cube	**CoV Reduction Ratio** (%)
	99.95

Alfa Water Srl
Legal & Operational headquarters:
Via Cavalieri di Vittorio Veneto, 25/a - 32036 Sedico (BL) - ITALY
P. +39 0437 573039 | F. +39 0437 298182
E. info@alfawater.it | W. www.alfawater.it
Cod.Fisc/P.IVA: 01183510252
N.REA: BL - 101111